REMARKS

1. Introduction

In the Office Action mailed September 25, 2006, the Examiner: (i) rejected claims 1, 4-7, 16-17, 26-27, and 29-32 under 35 U.S.C. § 102(b) as being anticipated by Mannermaa, European Patent Application EP 1 102 415 A2 ("Mannermaa") (Office Action, page 2); (ii) rejected claims 8-11 under 35 U.S.C. § 103(a) as being unpatentable over Mannermaa in view of Horslund, et al., U.S. Patent 5,983,160 ("Horslund") (Office Action, page 5); (iii) rejected claims 12-15, 18-25, 33, 36-42, and 44 under 35 U.S.C. § 103(a) as being unpatentable over Mannermaa in view of Lomp, et al., U.S. Patent 5,799,010 ("Lomp") (Office Action, page 6); (iv) rejected claim 28 under 35 U.S.C. § 103(a) as being unpatentable over Mannermaa in view of Applicant's admitted prior art (Office Action, page 11); (v) rejected claim 43 under 35 U.S.C. § 103(a) as being unpatentable over Mannermaa in view of Lomp and further in view of Applicant's admitted prior art (Office Action, page 12); and (vi) objected to claims 2-3 and 34-35 as being dependent on a rejected base claim, but indicated they would be allowable if rewritten in independent form including the limitations of the base claim and any intervening claims (Office Action, page 13). Applicant requests reconsideration and allowance of the rejected claims for the reasons set forth below.

2. Response to the Claim Rejections

(a) Claims 1-32

Of these claims, claim 1 is independent. The Examiner rejected claim 1 under § 102(b) as anticipated by Mannermaa. Applicant submits that the rejection is improper and should be withdrawn because Mannermaa does not teach each and every element recited in claim 1, as set forth below.

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Claim 1 recites "[a] method of monitoring radio frequency interference (RFI) in a satellite signal, wherein the satellite signal includes a carrier signal" comprising, *inter alia*, "calculating an RFI detector from the statistical variance estimate." The Examiner cited Mannermaa, page 5, lines 52-56 as teaching the claimed step of "calculating an RFI detector from the statistical variance estimate." (Office Action, page 2-3) However, the Examiner's cited sections of Mannermaa describe using discriminator outputs as inputs for steering the local PRN reference code generated by the local code generator. (Mannermaa, page 5, lines 55-58) Nothing in the Examiner's cited sections of Mannermaa shows or suggests the claimed step of "calculating an RFI detector from the statistical variance estimate." Moreover, Mannermaa does not even address the problem of monitoring or detecting RFI in a satellite signal. Indeed, Mannermaa mentions RFI only once, stating that "[s]ignals from the GPS satellites are subject to electromagnetic interference..., the CDMA signal in a GPS receiver can be very weak and noisy... [and thus,] it is essential that the CDMA signals be tracked and locked at all times." (Mannermaa, page 2, lines 29-32) Mannermaa's statement that GPS signals are subject to interference does not teach Applicant's claimed step of "calculating an RFI detector from the statistical variance estimate."

Therefore, Applicant submits that Mannermaa does not show or suggest all of the steps recited in claim 1. Accordingly, Applicant submits that claim 1 is allowable over Mannermaa for at least the reasons above. Claims 2-32 depend from claim 1. Applicant further submits that claims 2-32 are allowable for at least the reason that they depend from an allowable claim.

(b) Claims 33-43

Of these claims, claim 33 is independent. The Examiner rejected claim 33 under § 103(a) as being unpatentable over Mannermaa in view of Lomp. In response, Applicant submits that the

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rejection is improper and should be withdrawn because the Examiner's Mannermaa/Lomp combination does not teach each and every element of claim 33, as set forth below.

Claim 33 recites, inter alia, *inter alia* "calculating an RFI detector from the statistical variance estimate." The Examiner cited Mannermaa, page 5, lines 52-56 as teaching the claimed step of "calculating an RFI detector from the statistical variance estimate" (Office Action, page 8); however, Examiner's cited sections of Mannermaa describe using discriminator outputs as inputs for steering the local PRN reference code generated by the local code generator. (Mannermaa, page 5, lines 55-58) Nothing in the Examiner's cited sections of Mannermaa shows or suggests the claimed step of "calculating an RFI detector from the statistical variance estimate." Moreover, Mannermaa does not even address the problem of monitoring or detecting RFI in a satellite signal. Indeed, Mannermaa mentions RFI only once, stating that "[s]ignals from the GPS satellites are subject to electromagnetic interference..., the CDMA signal in a GPS receiver can be very weak and noisy... [and thus,] it is essential that the CDMA signals be tracked and locked at all times." (Mannermaa, page 2, lines 29-32) Mannermaa's statement that GPS signals are subject to interference does not teach Applicant's claimed step of "calculating an RFI detector from the statistical variance estimate."

Therefore, Applicant submits that the combination of Mannermaa and Lomp fails to show or suggest all of the elements recited in claim 33. Accordingly, Applicant submits that claim 33 is allowable over the combination of Mannermaa and Lomp for at least the reasons above. Claims 34-43 depend from claim 33. Thus, Applicant further submits that claims 34-43 are allowable for at least the reason that they depend from an allowable claim.

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(c) **Claim 44**

Claim 44 is independent. The Examiner rejected claim 44 under § 103(a) as being unpatentable over Mannermaa in view of Lomp. In response, Applicant submits that the rejection is improper and should be withdrawn because the Examiner's Mannermaa/Lomp combination does not teach each and every element of claim 44, as set forth below.

Claim 44 recites "[a] method for monitoring continuous wave and narrowband interference in a pass band of a satellite carrier signal" comprising, *inter alia*: (1) "means for comparing the standard deviation value to a threshold value"; and (2) "means for detecting an RFI fault when the standard deviation value exceeds the threshold value."

The Examiner cited Lomp, col. 44, line 55 through col. 45, line 3 as teaching a "means for comparing the standard deviation value to a threshold value." (Office Action, page 11) The Examiner's cited section of Lomp describes "comparing the output of the pilot despreader to a threshold" (Lomp, col. 44, lines 60-61); however, Lomp's disclosed "pilot despreader" is not the same as Applicant's claimed "standard deviation" which is calculated from Applicant's claimed "statistical variance estimate." Moreover, Lomp's disclosed step of "comparing the output of the pilot despreader to a threshold" is part of an "initial [satellite signal] acquisition phase." (Lomp, col. 44, lines 56-61. In contrast, Applicant's claimed "means for comparing the standard deviation value to a threshold value" is one element of Applicant's claimed "method for monitoring continuous wave and narrowband interference in a pass band of a satellite carrier signal." Thus, Examiner's cited section of Lomp does not teach Applicant's claimed "means for comparing the standard deviation value to a threshold value."

The Examiner cited Lomp, col. 52, lines 57-63 as teaching a "means for detecting an RFI fault when the standard deviation exceeds the threshold value." (Office Action, page 11) The

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Examiner's cited section of Lomp describes a "lock check algorithm" as a component of a "carrier tracking" process that uses the same comparison technique "as that for the [satellite signal] acquisition algorithms, except that the acceptance and rejection thresholds are changed to increase the probability of detection of lock" (Lomp, col. 52, lines 56-63); however, Lomp's disclosed "detection of [carrier signal] lock" is not the same as Applicant's claimed step of "detecting an RFI fault." Moreover, Lomp's disclosed "detection of [carrier signal] lock" is part of a "carrier [signal] tracking" process." (Lomp, col. 52, lines 56-63) In contrast, Applicant's claimed "means for detecting an RFI fault when the standard deviation exceeds the threshold value" is one element of Applicant's claimed "method for monitoring continuous wave and narrowband interference in a pass band of a satellite carrier signal." Thus, Examiner's cited section of Lomp does not teach Applicant's claimed "means for detecting an RFI fault when the standard deviation exceeds the threshold value."

Therefore, Applicant submits that the combination of Mannermaa and Lomp fails to show or suggest all of the elements recited in claim 44. Accordingly, Applicant submits that claim 44 is allowable over the combination of Mannermaa and Lomp for at least the reason above.

3. Conclusion

Applicant submits that the present application is in condition for allowance, and notice to that effect is hereby requested. Should the Examiner feel that further dialog would advance the subject application to issuance, the Examiner is invited to telephone the undersigned at (312) 913-0001.

Respectfully submitted,

Dated: November 17, 2006 By: _____

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